

BRIEF COMMUNICATION

ON THE SYSTEMATIC POSITION AND TYPE LOCALITY OF THE FROG
PACHYBATRACHUS PETERSII KEFERSTEIN, REPORTED FROM AUSTRALIA

The frog genus *Pachybatrachus* Keferstein (1868) was erected for a single specimen of the new species *P. petersii*.¹ The type locality was reported to be "Neu-Süd-Wales", and the collector Keferstein's brother-in-law Dr R. Schuette.² Keferstein referred the genus to the Engystomatidae (now a synonym of the Microhylidae), a family that in Australia is confined to northern Queensland and the northern extremity of the Northern Territory.

In a review of the Microhylidae Parker³ did not examine the holotype, but nevertheless referred *P. petersii* to the synonymy of *Uperodon systoma* (Schneider) of India and Sri Lanka, clearly disbelieving the accuracy of the type locality, and supporting the opinion of other contributors.⁴⁻⁵ This view was followed by Moore,⁶ More recently Cogger *et al.*⁷ included *P. petersii* as a species *inquirenda* in their annotated list of the Australian herpetofauna, listed it under "Microhylidae?", and elaborated by stating that the family allocation of the species is uncertain.

Böhme & Bischoff² do not question the family disposition but, confirming that the collector visited New South Wales in 1867, and also that Parker did not examine the holotype, attach more credence to the reported type locality than to Parker's opinion. They therefore regard *P. petersii* a member of the Australian fauna. Zweifel⁸ has criticised that action. None of these contributors appear to have examined the holotype.



Fig. 1. Holotype of *Pachybatrachus petersii* Keferstein (Z.F.M.K. 28358). Photo: P. Kempster. Scale in cm.

Through the courtesy of Dr W. Böhme of the Zoologisches Forschungsinstitut und Museum Alexander Koenig, Bonn, I have been permitted to examine the specimen involved (ZFMK 28388), with the objective of clarifying the systematic position of *P. petersii*, and determining whether it should be regarded a representative of the Australian fauna.

The holotype (Fig. 1) is a gravid female with a snout to vent length of 57 mm. In its gross habitus it resembles fossorial species referred to the leptodactylid genera *Notaden*, *Neobatrachus* and particularly *Heleioporus*. The specimen is in a good state of preservation but portions have been dissected extensively. Almost the entire pectoral musculature is missing, but the bones of the girdle appear complete. It is firmisternal with massive coracoids and a vast xiphisternum; there is no trace of procoracoids, clavicles or omosternum, and its appearance is therefore in accord with the figure accompanying the original description. The reduced and firmisternal nature of the pectoral girdle demonstrate that this species cannot be associated with Australian leptodactylids which are arciferal.

The massive reduction in the number of elements of the pectoral girdle, combined with the presence of a broad, fimbriated, pre-pharyngeal ridge, preceded by a shorter curved one (also illustrated by Keferstein) are consistent with the association of *Pachybatrachus* with *Uperodon*. In its size and external morphology *P. petersii* conforms in every respect to the redescription of *U. systoma*,³ and I have no hesitation in supporting Parker's³ view of considering these species synonymous.

The argument of Böhme & Bischoff² that the holotype came from New South Wales hinges entirely upon the substantiation that Schuette collected there. This issue is not in dispute, but confusion of a type locality occurs elsewhere in Keferstein's paper: he described *Hyla schuettei* from Sydney, whereas Copland⁹ demonstrated it to be synonymous with *Litoria adelaidensis* (Gray) which is confined to the southwest of Western Australia.¹⁰

Knowledge of the Australian herpetofauna, and its continental relationships, is sufficiently well developed to refute the possibility of a large microhylid frog occurring in both the Indian and Australian continents. How a specimen from India or Sri Lanka came to be included in the report of a collection from Australia remains unknown. Nevertheless, I can find no justification for believing that the holotype of *P. petersii* came from Australia or that there remains sufficient doubt to even merit its listing as a *species inquirenda*.

¹Keferstein, W. (1868). Arch. Naturgesch., Berlin 34, 274.

²Böhme, W. & Bischoff, W. (1984). Bonner Zool. Monogr. (19), 151-213.

³Parker, H. W. (1934). Frogs of the Family Microhylidae. (British Museum, Trustees, London).

⁴Boulenger, G. A. (1882). Catalogue of The Batrachia Salientia s. Ecaudata in the collection of the British Museum, 2nd Edition. (British Museum, London).

⁵Nieden, F. (1926). Das Tierreich 49, 1-110.

⁶Moore, J. A. (1961). Bull. Amer. Mus. nat. Hist. 121(3), 149-386.

⁷**Cogger, H. G.**, Cameron, E. E. & Cogger, H. M. (1983). Zoological Catalogue of Australia. 1. Amphibia and Reptilia. (Bureau of Flora and Fauna, Canberra.)
⁸**Zweifel, R. G.** (1985). Bull. Amer. Mus. nat. Hist. 182(3), 265-388.

⁹**Copland, S. J.** (1957). Proc. Linn. Soc. N.S.W. 82, 9-108.
¹⁰**Tyler, M. J., Smith, L. A. & Johnstone, R. E.** (1984). Frogs of Western Australia (Western Australian Museum, Perth).

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